

Office of Energy Efficiency
Energy Innovators Initiative
**Benchmarking
Guide for
School Finance Officers**

I Practice: and on Benchmarking

Summary is part of the pilot Benchmarking and Best Practices Program of Natural Resources Canada's Office of Energy Efficiency. Benchmarking is a highly useful tool for school boards to help them identify energy savings. This study allows you to compare your school board's energy intensities with similar organizations. The results are meant to be an eye-opener to help you identify potential opportunities

This page provides step-by-step instructions to calculate your school board's energy consumption and potential savings. By breaking down energy consumption and costs into their separate components and seeing how your school board's energy intensities compare with others, it will be easier for you to pinpoint what is causing higher consumption and spending. Once problem areas have been identified, fixing them will be possible by applying best practices. This, of course, leads to dollar savings for your school board and a cleaner environment for everyone. A more detailed benchmarking analysis is described in *Benchmarking Guide for School Facility Managers*.

Contents: Step-by-Step Instructions to Calculate Your School Board's Energy Intensities

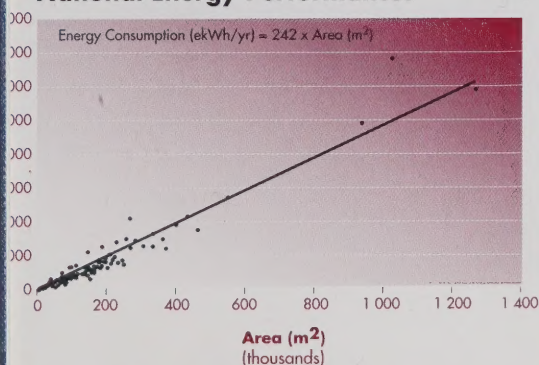
1. Calculate the total floor area of your school board's facilities in square metres. _____ m²
2. Determine your school board's annual energy consumption and costs. Convert the annual energy consumption into ekWh* to obtain the total energy consumption for your school board.

Electricity	_____ kWh	_____ ekWh	\$ _____
Natural gas	_____ m ³ x 37.2 / 3.6 =	_____ ekWh	\$ _____
Oil	_____ L x 38.68 / 3.6 =	_____ ekWh	\$ _____
Other	_____	_____ ekWh	\$ _____
Total:		_____ ekWh	\$ _____
3. Calculate your school board's energy intensities.
Total ekWh/m²: _____ \$/m²: _____
4. Compare your school board's energy intensities with those of other school boards nationally and regionally using the graph and table below.

*equivalent kWh

See How Your School Board Performs in Relation to the Benchmarks

National Energy Performances

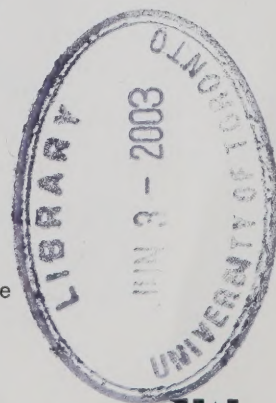


Region	ekWh/m ²	\$/m ²
National	242	8.8
British Columbia	240	7.6
Alberta	328	8.2
Saskatchewan	383	10.4
Manitoba	293	9.5
Ontario	255	9.2
Quebec	214	8.8
Atlantic	171	9.9
Territories	-	27.7

Note:
Average benchmarks are based on limited data and therefore should be used with caution. The Atlantic region and the Territories have the least amount of data, which may result in apparently extreme energy intensities.

For more information on the pilot Benchmarking and Best Practices Program, please contact the following:

Natural Resources Canada • Office of Energy Efficiency • Energy Innovators Initiative
580 Booth Street, 18th Floor • Ottawa ON K1A 0E4 • Tel.: (613) 995-6950
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Office of Energy Efficiency Energy Innovators Initiative Benchmarking Guide for School Finance Officers

Practice: and on Benchmarking

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This page provides step-by-step instructions to calculate your school board's energy consumption and potential savings. By breaking down energy consumption and costs into their separate components and seeing how your school board's energy intensities compare with others, it will be easier for you to pinpoint what is causing higher consumption and spending. Once problem areas have been identified, fixing them will be possible by applying best practices. This, of course, leads to dollar savings for your school board and a cleaner environment for everyone. A more detailed benchmarking analysis is described in *Benchmarking Guide for School Facility Managers*.

Instructions: Step-by-Step Instructions to Calculate Your School Board's Energy Intensities

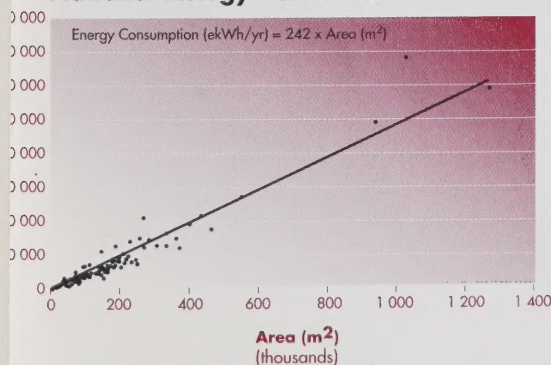
1. Calculate the total floor area of your school board's facilities in square metres. _____ m²
2. Determine your school board's annual energy consumption and costs. Convert the annual energy consumption into equivalent kWh* to obtain the total energy consumption for your school board.

Electricity	_____ kWh	_____ ekWh	\$ _____
Natural gas	_____ m ³ x 37.2 / 3.6 =	_____ ekWh	\$ _____
Oil	_____ L x 38.68 / 3.6 =	_____ ekWh	\$ _____
Other	_____	_____ ekWh	\$ _____
Total:		_____ ekWh	\$ _____
3. Calculate your school board's energy intensities.
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4. Compare your school board's energy intensities with those of other school boards nationally and regionally using the graph and table below.

*equivalent kWh

See How Your School Board Performs in Relation to the Benchmarks

National Energy Performances



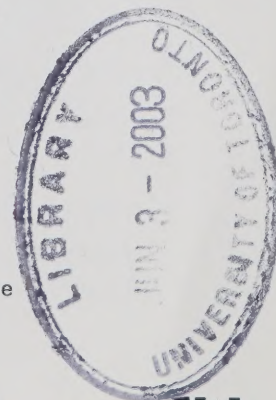
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A Good Practice: Background on Benchmarking

This executive summary is part of the pilot Benchmarking and Best Practices Program of Natural Resources Canada's Office of Energy Efficiency. Benchmarking is a highly useful tool for school boards to help identify cost savings. This study allows you to compare your school board's performance with similar organizations. The results are meant to be used as an eye-opener to help you identify potential opportunities to save money.

This page provides step-by-step instructions to calculate your school board's energy consumption and potential savings. By breaking down energy consumption and costs into their separate components and seeing how your school board's energy intensities compare with others, it will be easier for you to pinpoint what is causing higher consumption and spending. Once problem areas have been identified, fixing them will be possible by applying best practices. This, of course, leads to dollar savings for your school board and a cleaner environment for everyone. A more detailed benchmarking analysis is described in *Benchmarking Guide for School Facility Managers*.

The Components: Step-by-Step Instructions to Calculate Your School Board's Energy Intensities

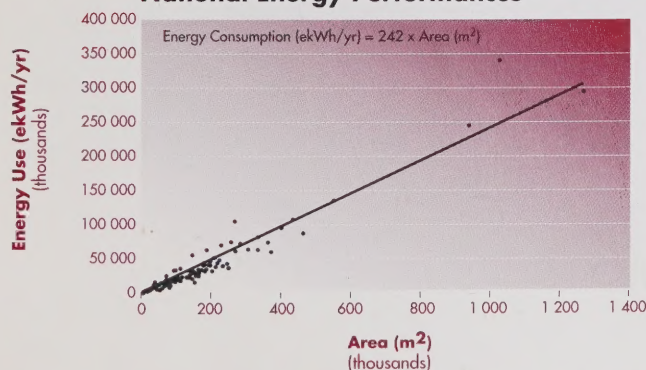
1. Calculate the total floor area of your school board's facilities in square metres. _____ m²
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Electricity	_____ kWh	_____ ekWh	\$ _____
Natural gas	_____ m ³ x 37.2 / 3.6 =	_____ ekWh	\$ _____
Oil	_____ L x 38.68 / 3.6 =	_____ ekWh	\$ _____
Other	_____	_____ ekWh	\$ _____
Total:		_____ ekWh	\$ _____
3. Calculate your school board's energy intensities.
Total ekWh/m²: _____ \$/m²: _____
4. Compare your school board's energy intensities with those of other school boards nationally and regionally using the graph and table below.

*equivalent kWh

Compare: See How Your School Board Performs in Relation to the Benchmarks

National Energy Performances

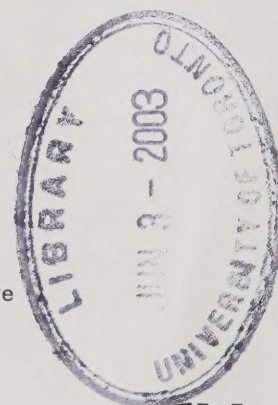


Region	ekWh/m ²	\$/m ²
National	242	8.8
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Une bonne stratégie : Contexte de l'analyse comparative

Ce sommaire fait partie du programme pilote d'analyse comparative et de stratégies optimales de l'Office de l'efficacité énergétique de Ressources naturelles Canada. L'analyse comparative permet aux commissions et conseils scolaires de cerner les possibilités d'économie financière et de comparer leur rendement à celui d'organismes semblables. Les résultats d'une telle analyse servent à identifier d'éventuelles possibilités de réduction de coûts.

La démarche de calcul de la consommation d'énergie d'une commission ou d'un conseil scolaire est détaillée ci-après. Par la suite, on présente un aperçu

des économies qu'il est possible de réaliser. Il est plus facile d'identifier les causes d'une consommation d'énergie élevée et de dépenses énergétiques importantes en répartissant la consommation énergétique et le coût de celle-ci selon les diverses sources d'énergie. On pourra ainsi comparer les données d'une commission ou d'un conseil scolaire avec celles des autres organismes. Une fois ces données établies, il sera possible d'améliorer la situation en adoptant les stratégies appropriées. Ainsi, la commission ou le conseil scolaire réalisera des économies sur le plan financier et la collectivité profitera des retombées environnementales positives. Une analyse comparative plus approfondie est présentée dans le *Guide d'analyse comparative à l'intention des gestionnaires d'établissements scolaires*.

Marche à suivre pour calculer les dépenses énergétiques d'une commission ou d'un conseil scolaire

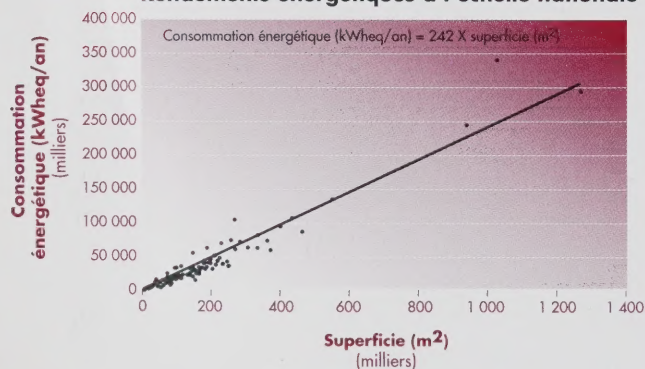
1. Calculer en mètres carrés la superficie totale des établissements de la commission ou du conseil scolaire.
Superficie totale _____ m²
2. Déterminer la consommation et le coût annuels d'énergie de la commission ou du conseil scolaire. Convertir la consommation annuelle d'énergie en kWheq* pour obtenir la consommation totale d'énergie de la commission ou du conseil scolaire.

Électricité :	_____ kWh	_____ kWheq	\$ _____
Gaz naturel :	_____ m ³ x 37,2/3,6 =	_____ kWheq	\$ _____
Mazout :	_____ L x 38,68/3,6 =	_____ kWheq	\$ _____
Autre :	_____	_____ kWheq	\$ _____
		Total : _____ kWheq	\$ _____
3. Calculer le coût énergétique de la commission ou du conseil scolaire par unité de surface.
Total kWheq/m² : _____ \$/m² : _____
4. Comparer les résultats obtenus aux données provenant d'autres commissions ou conseils scolaires à l'échelle nationale et régionale au moyen du tableau et du graphique suivants.

*kWh équivalent

Évaluation du rendement de la commission ou du conseil scolaire en fonction des données de référence

Rendements énergétiques à l'échelle nationale



Région	kWheq/m ²	\$/m ²
Canada	242	8,8
Colombie-Britannique	240	7,6
Alberta	328	8,2
Saskatchewan	383	10,4
Manitoba	293	9,5
Ontario	255	9,2
Québec	214	8,8
Atlantique	171	9,9
Territoires	-	27,7

Remarque : Les données présentées ci-contre sont issues d'un échantillonnage restreint; la prudence est donc de mise. Les régions de l'Atlantique ainsi que les Territoires ont fourni moins de données, ce qui pourrait expliquer leur marginalité.

Pour obtenir plus d'information sur le programme pilote d'analyse comparative et de stratégies optimales, veuillez communiquer avec :

Ressources naturelles Canada • Office de l'efficacité énergétique • Initiative des Innovateurs énergétiques
580, rue Booth, 18^e étage • Ottawa (Ontario) K1A 0E4 • Tél. : (613) 995-6950
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